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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/145,982	09/03/1998	TOMOHARU HASE	684.2728	6632

5514 7590 12/11/2003

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NEW YORK, NY 10112

EXAMINER

NGUYEN, HUNG

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/145,982	HASE, TOMOHARU	
	Examiner	Art Unit	
	Hung Henry V Nguyen	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 9/29/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-41, 44-46, 57-62, 65-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-41, 44-46, 57-62 and 65-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 29, 2003 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 36-37, 44, 57-58 and 65 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 36 and 57, the specification of the disclosure lacks adequate support for the claimed provision of "wherein apertures of the adjacent...with an angle other than zero degree and 180 degrees". Applicant is reminded that when claimed elements that are not fully discussed in detail, this falls under 112, first paragraph, applicant's disclosure is lacking in this aspect. The remotest relevancy to the claimed subject matter may be figure 7 and in the statement of "a straight line connecting the passages 32 of adjacent lens supports 31 is out of

parallel to an optical axis of the lens 30” (see page 14, line 14 to page 15, line 6). However, it is the Examiner’s position that this statement and figure 7 (or figure 2) fail in any manner to teach the claimed limitation of apertures of adjacent separating portions being rotated from one another at other than zero or 180 degrees. If the Applicant does not agree with the Examiner, the Examiner respectfully submits that Applicant points out clearly supporting evidences that the instant specification supports the subject matter which applicant regards as the invention. Comparing figure 7 of instant disclosure and figure 7 of Tanimoto et al’ 4,690,528, the Examiner fails to find any differences.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 36, 37, 44, 57-58 and 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 36 and 57, the recitation of ““wherein apertures of the adjacent...with an angle other than zero degree and 180 degrees” is ambiguous and indefinite (see rejection under 35 U.S.C. 112, first paragraph).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2851

7. Claims 36-41, 44-46, 57-62 and 65-67 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanimoto et al (U.S.Pat. 4,690,528).

With respect to claims 36-41, 44-46, 57-62 and 65-67, Tanimoto et al (fig.7) discloses an exposure apparatus comprising all basic features of the instant claims including: an optical system (201) having at least one optical element (L1-L5) and including a supporting portion (205) for supporting at least one optical element and having a plurality of apertures (211-213) through which a gas can flow; an illumination optical system (102) for illuminating a reticle (R) and a gas supply (223); the optical system comprises a plurality of spaces (a-d) where the apertures of the two adjacent two lenses are placed "at rotational positions, about an optical axis of the optical system, with angle other than zero degree and 180 degrees"/ or "the a straight line connecting apertures of the adjacent two separating portions is not parallel to any of the optical axes /or is not contain in any of planes including optical axes of the optical elements of the adjacent two separating portion (as clearly illustrated from fig.7).

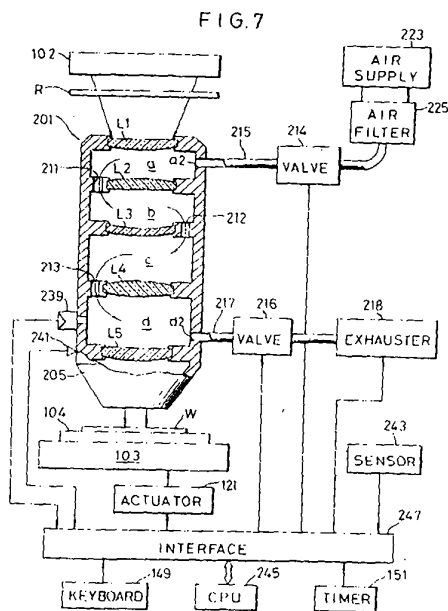


Fig.7 of Tanimoto

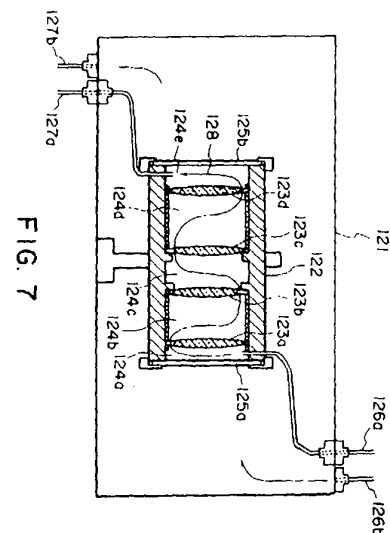


Fig.7 of present application

Response to Amendments/Arguments

8. Applicants' amendments filed September 2, 2003 have been entered. Applicant's arguments with respect to prior art rejection have been carefully reviewed but they are not found persuasive. Based on figure 7 of Tanimoto, Applicant argues that while Tanimoto teaches air holes (for example: 211, 212) between adjacent optical element spaces are located 180 degrees apart, claims 37 and 57 of the present applicant, call for "with angles other than zero degree and 180 degrees"; the Examiner respectfully disagrees with the applicant. Firstly, the amended claims 36 and 57 are rejected under 35 U.S.C. first and second paragraphs as set forth above. Secondly, the Applicant can not rely on the drawing of Tanimoto to support his/her position since the drawings in a patent need not be drawn to scale. Unless otherwise stated, there is no evidence, or any statements in reference of Tanimoto, other than applicant's arguments, which suggest that apertures (211, 212) are disposed at 180 degrees difference. Also, it is the Examiner's position that the difference would be met by manufacturing tolerance and/or defect. Would having a very small angular difference, such as 0.000001 degrees between the air hole 212 and the air hole 213, achieve the claimed results? Yes, since such angular difference would be very common in manufacturing. Finally, Applicant argues that a straight line between air holes 211 and 212 and a straight line between air holes 212 and 213 are not parallel to the optical axis of the optical system, these straight lines therefore intersect the optical axis of lens L2; the Examiner disagrees with the Applicant since this is not quite true. One having ordinary skill in the art would recognize that the straight lines between air holes 212 and 213 and the straight line between hole 211 and 212 do intersect with a plane that contains the optical axis of the optical

Art Unit: 2851

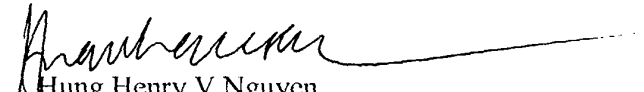
system but these straight lines may not intersect with the optical axis of the optical elements.

Therefore, Tanimoto meets all of the limitations of the instant claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 703-305-6462. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Hung Henry V Nguyen
Primary Examiner
Art Unit 2851

hvn
12/2/03